

Valuation of Drilling Rig in the Caspian Sea, Turkmenistan

Locality

Located in Central Asia, Turkmenistan is covered largely by the Karakum Desert and bordered by the Caspian Sea. Home to key stops along the ancient silk road and possessing the 4th largest reserve of natural gas in the world today, the former constituent republic of the Soviet Union continues to be a significant part of the world's energy trade.

The Approach

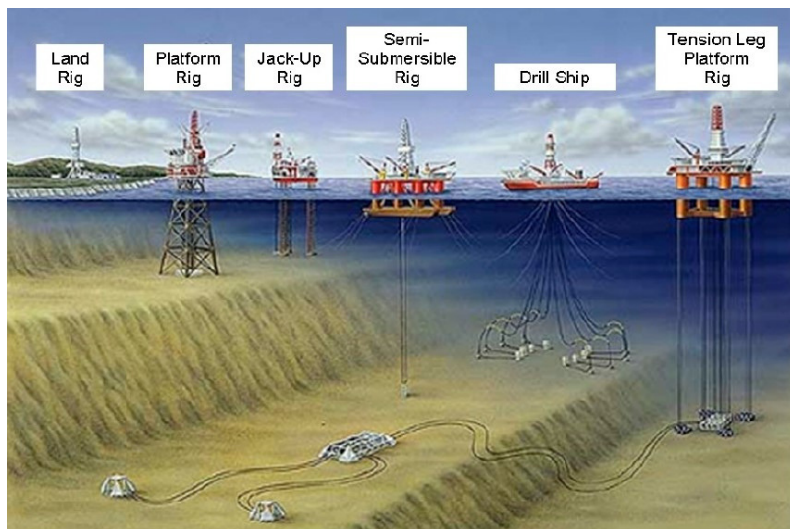
Robert Khan was invited to determine the Estimated Useful Life & Residual Value (RV) of a drilling rig in the Caspian Sea, off the coast of Turkmenistan. Estimated Useful Life (EUL) is defined as a period over which an asset is expected to be available for use by an entity. Residual Value is defined as the amount at which the asset at the end of its EUL can be disposed of less any direct selling costs.

The market sentiments are a strong contributing factor in the valuation of assets and in the absence of definitive market comparables, the Cost Approach was selected due to this lack. The other approach, the Cashflow Approach was not considered as the required metrics was not readily available.

The Cost Approach

The Cost Approach takes into consideration the unique configuration of the drill rig.

The Cost of Replacement New can be established from research sources such as with manufacturers and fabricators of said assets.



Depending on different rig configurations, offshore rigs are rated to drill in water depths ranging from shallow depths of 80 feet to deeper depths of 12,000 feet. In the case of jack-up rigs, the maximum water depth it can operate in is approximately 550 feet, with drilling depths of approximately 35,000 feet. Once the drilling reaches the oil reservoir deep beneath the earth's crust, oil is then transported out either by large diameter trunks to the mainland or to a Floating Production, Storage and Offloading unit (FPSO) which essentially is a floating vessel for the production and processing of crude oil and it also serves as a temporary storage facility.

As offshore rigs are generally situated a distance away from the mainland, supply boats have to make regular scheduled trips to and fro the rigs, delivering necessary supplies such as food, water and equipment. Crew personnel are transported either by helicopters or crew boats.

There are many shipyards around the world capable of building offshore drilling rigs with majority of the builders mainly located

Types of Mobile Offshore Drilling Units (MODU)

Mobile offshore drilling units are used to drill, complete and work over well bores in marine environments. The types of MODU (see illustration) used for offshore drilling has evolved over time due to sophisticated technologies, economic, local and safety requirements to accomplish a drilling program. The principal types of MODUs are:

a) Semi-submersible

An integrated unit which is generally used for deep water drilling with more than 10,000 feet depth and operates from a floating but 'semi-submerged' position by means of a water ballast system in which the lower hull is approximately 40 feet below the water surface. It consist of tubular hulls or pontoons on which are mounted cylindrical columns supporting a fixed upper deck which serves as a drilling platform for the drilling rig and is held in drilling position by chains and anchors. It is not self-propelled and must be towed to the drilling location.

b) Self-propelled drilling rig

Commonly known as a 'drillship' whereby the drilling rig is mounted onto a conventional vessel. Such rigs can also be used for deepwater drilling and because it is self-propelled, it has the flexibility to move around and capable of operating in remote locations. During drilling, it is generally held in position via dynamic positioning system.

c) Jack-up drilling rig

The subject rig is a jack-up drilling rig. This type of rigs are generally deployed in the shallow water region and has legs that penetrate into the sea floor, thereby permitting the hull to be jacked up to the expected highest waves based on the leg length and the hull served as a drilling platform. This rig is not self-propelled and requires towing to the desired location. During towing, the legs will be above the water surface and the hull acts like a huge floating pontoon.

in Asia, namely Korea's Samsung Heavy Industries and Singapore's Keppel Corporation, both are two of the larger rig builders in the world.

The expertise and experience of the consultants are felt on the ground as the collection of key information such as the maintenance integrity, the research to discover the EUL and RV adds a good degree of robustness and defensibility to the valuation model.

The team of consultants at Robert Khan was able to furnish our clients with a justified and clear proposition of the EUL & RV of the drilling rig.

Considerations

The availability of market comparables influences the approach selection, which in this case is lacking, coupled with the current market sentiments in the oil and gas industry led to the selection of the cost-reducing approach. The concluding report was able to pinpoint the EUL & RV of the asset.

The role of effective and experienced asset valuation consultants will be to source and consolidate the available resources and information to formulate the best fit for approaches to meet the instruction.

By adhering to professional principles and staying aware of market sentiments, a well crafted and grounded valuation will and can stand the test of time and scrutiny.

Yours,

Editor

Robert Khan & Co Pte Ltd